

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



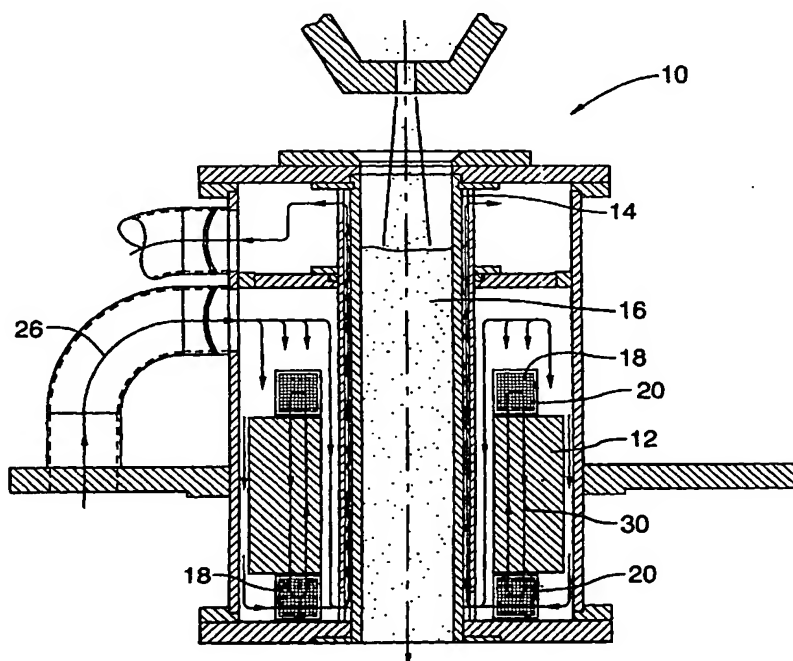
(43) International Publication Date
4 March 2004 (04.03.2004)

PCT

(10) International Publication Number
WO 2004/018128 A2

- (51) International Patent Classification⁷: **B22D 11/11**
- (21) International Application Number:
PCT/CA2003/001209
- (22) International Filing Date: 19 August 2003 (19.08.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
10/206,182 20 August 2002 (20.08.2002) US
- (71) Applicant (for all designated States except US): **ABB INC.** [CA/CA]; 8585 Trans-Canada Highway, St-Laurent, Québec H4S 1Z6 (CA).
- (71) Applicants and
- (72) Inventors: **BEITELMAN, Leonid** [CA/CA]; 10 Parklawn Crescent, Thornhill, Ontario L3T 6X1 (CA). **SEGAL, Vladimir** [US/US]; 45 Brandon Avenue, Livingston, NJ 07039 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): **CURRAN, Christopher, P.** [CA/CA]; 31 Hooper Drive, Pontypool, Ontario L0A 1A0 (CA).
- (74) Agents: **STEWART, Michael, I.** et al.; Sim & McBurney, 6th Floor, 330 University Avenue, Toronto, Ontario M5G 1R7 (CA).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Published:**
— without international search report and to be republished upon receipt of that report
- For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COOLING ELECTROMAGNETIC STIRRERS



(57) Abstract: Cooling of the electrical coils of an electromagnetic stirrer is effected using a ferrofluid.